

"ACCLADIOSIS"

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[Reprinted from the PROCEEDINGS OF THE ROYAL SOCIETY OF MEDICINE,
1917, Vol. XI (Section of Dermatology), pp. 12—18.]



London

JOHN BALE, SONS & DANIELSSON, LTD.
OXFORD HOUSE

83-91, GREAT TITCHFIELD STREET, OXFORD STREET, W. 1

1918

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CASES of accladiosis having been very recently observed in Europe (Balkan Zone) by myself, Laurie, and others, it may perhaps be of interest to give a brief general account of the condition.

Historical and Geographical Distribution.—The condition has been observed by me since 1907 in Ceylon, but I did not fully describe it until last year. Cases have been observed in Ceylon, the Federated Malay States, and Macedonia.

Clinical Symptoms.—In a well marked case ulcerative lesions are present all over the body, though they are in smaller number or absent altogether on the face, scalp, palms, and soles. Most of the ulcers are sharply defined, roundish or oval, with red granulating fundus. Their appearance is well shown in the illustration (fig. 1), a photograph of a Ceylon case. In many cases there is abundant purulent secretion which collects and dries up in thick yellow crusts covering the ulcers. Gummata-like nodules and furuncle-like lesions may also be observed. The superficial lymphatic glands may be enlarged. The lesions in most cases give very little pain, or none at all; itching is often completely absent, but occasionally the patient complains of slight pruritus. The general condition of the patient is not seriously affected for a long time, but he often complains of a certain degree of weakness and discomfort. Not infrequently there is serotine fever. The blood has been examined in two cases in the Tropics; in one case in the Balkanic Zone: Wassermann reaction negative. In the first two cases red blood corpuscles and hæmoglobin were slightly below the normal; in one there was

eosinophilia (5 per cent.) which may have been due to a concomitant *Ascaris lumbricoides* infection. In the Macedonian case, the blood of which was examined, there was a distinct leucocytosis (16,000 leucocytes) of the polymorphonuclear type; in this patient there was abundant purulent secretion and serotine fever, which on some days reached 102° and 103° F.

Histo-pathology.—The histo-pathological investigation of the condition is far from completed. From the preliminary investigation it would seem that the lesions are very similar to those one sees in sporotrichosis, and that three types of lesions may be distinguished: (1) An epithelioid or tuberculoid type, with presence of giant cells; (2) a lympho-connective tissue type (syphilitic); (3) polymorphonuclear type (ecthymatous).

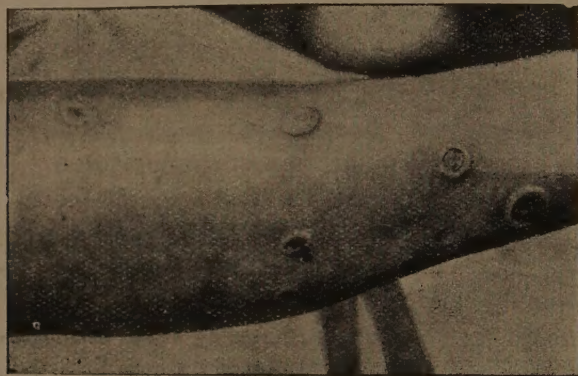


FIG. 1.

Case of accladiosis.

Ætiology.—The condition is caused by a fungus, which, as stated, I isolated in Ceylon. Cultures were sent to Professor Pinoy, of the Pasteur Institute, who very kindly investigated it botanically and classified it, giving it the name of *Accladium Castellani* (Pinoy, 1916). I may quote a portion of Professor Pinoy's description:—

"The growth on artificial media (such as carrot, potato, glucose agar) consists of many small roundish masses, which later on may coalesce, covered by spiculated formations, giving them a prickly appearance, and consisting of erect, straight filaments, parallel to each other, or at times interlacing. These filaments are approximately 2 microns in diameter, and carry laterally pseudo-conidia of variable shape, cylindriciform, pyriform, or spherical, attenuated in

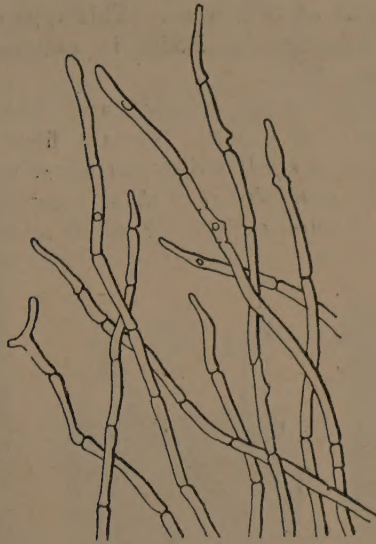


FIG. 2.

Microscopical appearance of the fungus in hanging-drop culture,
twenty-four hours old.

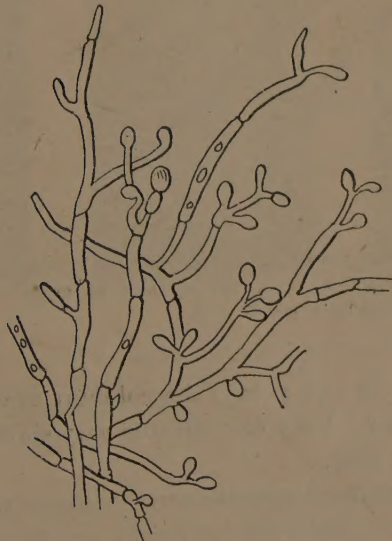


FIG. 3.

Microscopical appearance of the fungus in hanging-drop culture,
three days old.

size at their points of insertion. Most of these pseudoconidia are 4 microns in length with a breadth of 3 microns. This type of fructification recalls the type *Accladium* described by Bodin in certain species of the genus *Trichophyton* (Malmsten, 1848).

"These pseudoconidia become detached and then develop by sprouting, and mycelial filaments are formed. Certain filaments produce spherical chlamydospores arranged in small strings, as found in certain fungi of the genus *Fusarium*. These small chains of chlamydospores are very frequently terminal, the dimensions being variable—8 to 10 microns" (figs. 2-4).

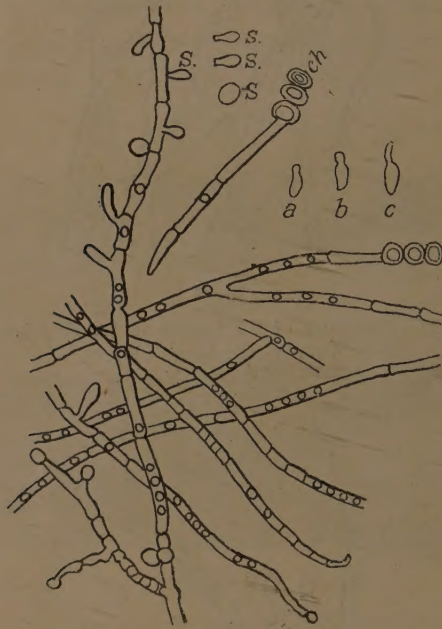


FIG. 4.

Microscopical appearance of the fungus in hanging-drop culture, five days old. *S*, pseudoconidia; *a*, *b*, *c*, development of mycelial filaments from pseudoconidia; *ch*, chlamydospores.

In cultures on carrot and potato the colonies are white, on glucose agar often amber colour. Very old cultures may show a certain amount of pigmentation (figs. 5-9).

Diagnosis.—A positive diagnosis can be made with certainty only by cultural methods. The microscopical examination alone is of very little use, hyphomycetic elements being as a rule absent microscopically in the scrapings from the ulcers and contents of nodules.

The material should be inoculated in glucose agar tubes. Four to eight days after inoculation small, yellowish, amber-coloured colonies appear; they enlarge fairly rapidly, become hemispheric and often coalesce in a knotty mass. At times the colonies may not fuse together; each colony then remains separate, reaches a large size, and



FIG. 5.



FIG. 6.



FIG. 7.

Fig. 5.—*Accladium Castellonii* (Pinoy); young culture on carrot.

Fig. 6.—Young culture on potato.

Fig. 7.—Old culture on potato.

occasionally presents peculiar radiating furrows as seen in certain species of trichophytons. In many cases where the material has been collected from ulcerated lesions, the fungus grows in symbiosis with a coccus and it may be difficult to separate the two organisms. The

malady is often taken for a syphilitic condition. The history, the negative examination of the lesions for spirochætes, the failure of mercury and salvarsan treatment, will exclude it. When the lesions are covered by raised, thick, bright, yellow crusts the condition must



FIG. 8.



FIG. 9.

Cultures on glucose agar.

be differentiated from yaws: in accladiosis, on removing the crusts, ulcers are found, while in yaws, the typical frambœsiform nodules will be seen; in scrapings from yaws lesions the *Spirochæta* will be found. Accladiosis can be differentiated from sporotrichosis and other affections of hyphomycetic origin by cultural methods.

Prognosis.—The course of the disease may be very long, and there is very little or no tendency to spontaneous cure; but if a proper treatment is carried out a cure can be obtained fairly rapidly in the majority of cases. A few cases respond to treatment extremely slowly.

Treatment.—Potassium iodide given in full doses (20 gr. t.d.) acts satisfactorily. The drug appears to act at times more rapidly if given according to Professor Pinoy's method—viz., in conjunction with a salt-free diet. If potassium or sodium iodide is not well borne, sajodin and other similar preparations may be tried, but the result is not so satisfactory. Mercury and arsenic have no effect on the course of the malady. As regards local treatment, it is sufficient to keep the ulcers clean by using a weak mercury perchloride lotion.

REFERENCE.

- CASTELLANI, ALDO. "Notes on a New Ulcerative Dermatomycosis," with Report on the Causative Fungus by E. PINOY, *Brit. Med. Journ.*, October 7, 1916, p. 486.

